

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior revisions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A III-nitride compound semiconductor light emitting device including an n-type III-nitride semiconductor layer, an active layer made of III -nitride semiconductor and deposited over the n-type III-nitride semiconductor layer, a p-type III-nitride semiconductor layer deposited over the active layer made of III-nitride semiconductor, and a p-side electrode deposited over the p-type III-nitride semiconductor layer, the light emitting device comprising:

a first layer composed of a carbon-containing compound layer, the first layer interposed between the p-type III-nitride semiconductor layer and the p-side electrode, and the first layer being grown on the p-type III-nitride semiconductor layer; [[and]]

a second layer composed of a III-nitride semiconductor layer, the second layer ~~grown after including a plurality of island-like protrusions, each of the protrusions being formed on a top surface of the first layer; and is grown~~

the p-side electrode being formed on said second layer.

2. (Canceled)

3. (Original) The III-nitride compound semiconductor light emitting device of claim 1, wherein the first layer is one selected from the group consisting of silicon carbide (Si_aC_b ; $a, b \neq 0$), silicon carbon nitride ($\text{Si}_c\text{C}_d\text{N}_e$; $c, d, e \neq 0$) and carbon nitride (C_fN_g ; $f, g \neq 0$).

4. (Original) The III-nitride compound semiconductor light emitting device of claim 3, wherein the n-type III-nitride semiconductor layer, the active layer made of III-nitride semiconductor, the p-type III-nitride semiconductor layer, and the second layer is composed of $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$), and wherein the second layer is grown in a form of a plurality of islands due to different material characteristics between the first layer and the second layer.
5. (Original) The III-nitride compound semiconductor light emitting device of claim 3, wherein the second layer is a p-type III-nitride semiconductor layer.
6. (Original) The III-nitride compound semiconductor light emitting device of claim 4, wherein the second layer is made of a p-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$).
7. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the first layer is in a thickness of 5 Å to 1000 Å.
8. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the growth temperature of the first layer is 500° C. to 1,100° C.
9. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the first layer is a p-type carbon-containing compound layer.

10. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the first layer is an n-type carbon-containing compound layer.

11. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the first layer is formed as a nonuniform layer.

12. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the first layer is formed as a uniform layer.

13. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the second layer is in a thickness of 100Å to 5000Å.

14. (Currently amended) The III-nitride compound semiconductor light emitting device of claim 6, further comprising:

a third layer made of $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) and formed on
~~grown after the second layer is grown.~~

15. (Original) The III-nitride compound semiconductor light emitting device of claim 14, wherein the third layer is in a thickness of 5 Å to 200 Å.

16. (Previously presented) The III-nitride compound semiconductor light emitting device of claim 3, wherein the p-side electrode is made of anyone selected from the group consisting of

nickel, gold, silver, chrome, titanium, platinum, palladium, rhodium, iridium, aluminum, tin, ITO, indium, tantalum, copper, cobalt, iron, ruthenium, zirconium, tungsten, and molybdenum.

17. (Original) The III -nitride compound semiconductor light emitting device of claim 3, wherein the silicon source for growing the first layer is any one selected from the group consisting of SiH_4 , Si_2H_8 , and DTBSi, the carbon source for growing the first layer is anyone selected from the group consisting of CH_4 , C_2H_4 , and CBr_4 , and the nitrogen source for growing the first layer is anyone selected from the group consisting of NH_3 , and Hydrazine-based source material.

18. (Currently amended) A III-nitride compound semiconductor light emitting device comprising:

a substrate [[10]];

a buffer layer [[11]] deposited on the substrate [[10]];

an n-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) layer [[12]] deposited on the buffer layer [[11]];

an $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) active layer [[13]] deposited on the n-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) layer [[12]];

an p-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) layer [[14]] deposited on the $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) active layer [[13]];

a first layer [[20]] made of one selected from the group consisting of silicon carbide (Si_aC_b ; $a, b \neq 0$), silicon carbon nitride ($\text{Si}_c\text{C}_d\text{N}_e$; $c, d, e \neq 0$) and carbon nitride (C_fN_g ; $f, g \neq 0$), and grown on the p-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) layer [[14]];

a second layer [[21]] made of p-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$), composed of a plurality of islands for increasing external quantum efficiency, and formed on ~~grown after~~ the first layer [[20]] ~~is grown~~;

a p-side electrode [[17]] deposited on the second layer; and,

an n-side electrode [[18]] deposited on the n-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) layer [[12]].

19. (Currently amended) The III-nitride compound semiconductor light emitting device of claim 18, wherein the p-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) layer [[14]] and the second layer [[21]] made of p-type $\text{Al}(x)\text{Ga}(y)\text{In}(1-x-y)\text{N}$ ($0 \leq x \leq 1$, $0 \leq y \leq 1$, $0 \leq x+y \leq 1$) are made of GaN.

20. (Original) The III-nitride compound semiconductor light emitting device of claim 18, wherein the light emitting device is a light emitting diode.